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     (FILE 'HOME' ENTERED AT 12:25:00 ON 06 JUN 2002)

     FILE 'CAPLUS, BIOSIS, USPATFULL, WPIDS, AGRICOLA' ENTERED AT 12:25:16 ON
     06 JUN 2002

     FILE 'REGISTRY' ENTERED AT 12:25:38 ON 06 JUN 2002
                E LECITHIN/CN
                E CHOLINE/CN
L1            1 S E15
                E LECITHIN
                E LECITHIN/CN
L2            1 S E43
L3            1 S E42

     FILE 'CAPLUS, BIOSIS, USPATFULL, WPIDS, AGRICOLA' ENTERED AT 12:29:49 ON
     06 JUN 2002
L4        80495 S  8030-76-0 OR LECITHIN? OR LYSOLECITHIN?
L5      1886218 S ENZYME? OR ?LIPASE? OR AMYLASE? OR GALACTOSIDASE? OR GLUCANAS
L6      2938620 S FOOD? OR FEED? OR FODDER?

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ANSWER 80 OF 116 USPATFULL

AB A novel dehydration method using anhydrous glycosylfructose as the desiccant is disclosed. Anhydrous glycosylfructose is converted to the crystalline hydrate and acts as the desiccant when incorporated into a hydrous matter. Natural saccharides such as palatinose, raffinose, erlose, and melezitose can be used. The dehydration is applicable to hydrous matters, such as those of foods, pharmaceuticals, cosmetics, and their materials and intermediates.

AN 89:19165 USPATFULL

TI Dehydration of hydrous matter using anhydrous glycosylfructose

IN Mitsuhashi, Masakazu, Okayama, Japan
Sakai, Shuzo, Okayama, Japan
Miyake, Toshio, Okayama, Japan

PA Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo, Okayama, Japan (non-U.S. corporation)

PI US 4812444 19890314

AI US 1986-942421 19861216 (6)

PRAI JP 1985-292297 19851226

DT Utility

FS Granted

EXNAM Primary Examiner: Griffin, Ronald W.

LREP Browdy and Neimark

CLMN Number of Claims: 8

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 654

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 81 OF 116 USPATFULL

AB A novel dehydration process using anhydrous aldohexose as the desiccant is disclosed. Anhydrous aldohexose is converted to crystalline hydrate and acts as the desiccant when it is incorporated into a hydrous substance. Natural saccharides such as glucose, galactose, and mannose are suitable for the aldohexose. The dehydration is applicable to hydrous matters, such as those of foods, pharmaceuticals, cosmetics, and their materials and intermediates.

AN 89:17428 USPATFULL

TI Dehydration of hydrous matter using anhydrous aldohexose

IN Mitsuhashi, Masakazu, Okayama, Japan
Sakai, Shuzo, Okayama, Japan
Miyake, Toshio, Okayama, Japan

PA Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo, Okayama, Japan (non-U.S. corporation)

PI US 4810827 19890307

AI US 1986-942423 19861216 (6)

PRAI JP 1985-292295 19851226

DT Utility

FS Granted

EXNAM Primary Examiner: Griffin, Ronald W.

CLMN Number of Claims: 8

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 645

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 82 OF 116 WPIDS (C) 2002 THOMSON DERWENT

AB JP 01141571 A UPAB: 19930923
A new sort of seasoning liq. with separate phases comprises an aq. phase contg. gummic substances for food use and an oily phase contg. enzymic processed lecithin and/or chirayasaponin.
USE - A new type of liq. used for dressing sauce with stable and homogeneous suspension after shaking.
0/0

AN 1989-202926 [28] WPIDS

DNC C1989-090080
TI Seasoning liq. with separate phases - comprises aq. phase contg. gum substances for food use and oil phase contg. enzymic processed lecithin and/or chirayasaponin.
DC D13
PA (NAKA-N) NAKANO VINEGAR CO LTD
CYC 1
PI JP 01141571 A 19890602 (198928)* 8p
ADT JP 01141571 A JP 1987-300378 19871127
PRAI JP 1987-300378 19871127

L9 ANSWER 83 OF 116 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB .beta.-Galactosidase was encapsulated in lecithin-cholesterol liposomes prepared by dehydration-rehydration (DR) and reverse-phase evaporation (RE). In both methods, the encapsulation efficiency decreased as cholesterol content increased. Enzyme activity was determined to be located both on the surface and in the interior of the vesicle. When the enzyme-loaded vesicles were exposed to acidic buffer solution, the activity on the surface of the vesicle was rapidly lost. The enzyme in the interior of the vesicle was more acid-resistant. The residual activity of enzyme depended on the molar ratio lecithin: cholesterol (L:C ratio). In both methods, the vesicles which showed the greatest acid resistance were those with an L:C molar ratio of 1:3. These vesicles retained their enzymatic activity and acid resistant character after 1 month storage at 5.degree. C under nitrogen.
AN 1989:452531 BIOSIS
DN BA88:100803
TI THE EFFECT OF CHOLESTEROL CONTENT OF PHOSPHOLIPID VESICLES ON THE ENCAPSULATION AND ACID RESISTANCE OF BETA GALACTOSIDASE FROM ESCHERICHIA-COLI.
AU MATSUZAKI M; MCCAFFERTY F; KAREL M
CS DEP. CHEM. ENG., MASSACHUSETTS INST. TECHNOL., CAMBRIDGE, MASS. 02139, USA.
SO INT J FOOD SCI TECHNOL, (1989) 24 (4), 451-460.
CODEN: IJFTEZ. ISSN: 0950-5423.
FS BA; OLD
LA English

L9 ANSWER 84 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB A emulsifier compn. for **food** processing contains **enzyme** -treated phospholipids [e.g. **lecithin** (I)] and monoglycerides. Thus, I treated with PL-A (Novo Industry, Co.) was mixed with oleic acid monoglyceride to give an emulsifier prepn. The prepn. had an acid value of 65, peroxide value of 0, and acetone-insol. content of 55%.
AN 1989:572746 CAPLUS
DN 111:172746
TI Emulsifier composition containing enzyme-treated phospholipids and monoglycerides for food processing
IN Yoshitomi, Hideaki; Saito, Mieko; Takagi, Yoshiaki
PA Nisshin Oil Mills, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63248430	A2	19881014	JP 1987-83553	19870404
	JP 05012977	B4	19930219		

L9 ANSWER 85 OF 116 WPIDS (C) 2002 THOMSON DERWENT
AB JP 63302929 A UPAB: 19930923
In the mfg. process of an emulsifying agent mixt. of phospholipid, fat and oil, is treated with phospholipase-A and lipase. Gum-removed oil cake

and/or lecithin-paste is used as the mixt. of phospholipid fat and oil. The mixt. of phospholipid, fat and oil is treated with phospholipase-A primarily, and secondly with lipase. The phospholipase-A and lipase are used concurrently.

USE/ADVANTAGE - Method can be used for **food** processing. The process can use gum-removed oil cake as a starting material and is not limited only to **lecithin** as in a conventional processes. The process also characterised by using two **enzymes** i.e. **phospholipase**-A and **lipase** and the reaction efficiency in decomposing the ester bonding of phospholipid and triglyceride is highly increased in comparison with conventional processes using one enzyme.

0/0

AN 1989-034483 [05] WPIDS
DNC C1989-014963
TI Mfg. process of emulsifying agent - comprises treating mixt. of phospholipid, fat and oil with phospholipase-A and lipase.
DC D13
PA (NISW) NISSHIN OIL MILLS LTD
CYC 1
PI JP 63302929 A 19881209 (198905)* 3p
JP 2559591 B2 19961204 (199702) 3p
ADT JP 63302929 A JP 1987-140602 19870603; JP 2559591 B2 JP 1987-140602 19870603
FDT JP 2559591 B2 Previous Publ. JP 63302929
PRAI JP 1987-140602 19870603

L9 ANSWER 86 OF 116 WPIDS (C) 2002 THOMSON DERWENT
AB JP 63279751 A UPAB: 19930923
A new type of lubricant oil, utilised in moulds for confectionery and bakery, comprises fats and oils for **food** use, **lecithin** and enzymically treated prod. of **lecithin** with **phospholipase**.

USE - Lubricants does not burn even after multiple use in baking moulds.

0/0

AN 1989-003043 [01] WPIDS
DNC C1989-001334
TI Lubricant oil used in bakery moulds, etc. - comprises fats, oils, lecithin and enzyme-treated prod. of lecithin with phospholipase.
DC D13
PA (NIOF) NIPPON OILS & FATS CO LTD
CYC 1
PI JP 63279751 A 19881116 (198901)* 4p
JP 07004162 B2 19950125 (199508) 4p
ADT JP 63279751 A JP 1987-114024 19870511; JP 07004162 B2 JP 1987-114024 19870511
FDT JP 07004162 B2 Based on JP 63279751
PRAI JP 1987-114024 19870511

L9 ANSWER 87 OF 116 WPIDS (C) 2002 THOMSON DERWENT
AB EP 292052 A UPAB: 19930923
Fish feeds comprise 80-100 wt% proteinaceous material (I) and 0-20 wt% binder (II). The feeds are in powder form with a particle size below 0.35 mm.

Pref. (I) comprises 20-100 wt% fish meal and 0-80 wt% single-cell protein and/or **enzyme** protein (e.g. cellulose). (II) comprises fish oil in an amt. of 0-15 wt% and/or **lecithin** in an amt. of 0-8 wt%. The **feeds** also contain 0-10 wt% glucose and 0-1 wt% vitamins and trace elements.

USE/ADVANTAGE - The feeds are suitable for young fish, esp. lavaret fry. They are less expensive then plankton, have a protein and amino acid compsn. suitable for young fish, and sink slowly in water.

0/0

AN 1988-339210 [48] WPIDS
DNN N1988-257213 DNC C1988-149877
TI Powdered fish feeds - contg. protein and opt. binder.
DC D13 P14
PA (SUSO) SUOMEN SOKERI OY
CYC 17
PI EP 292052 A 19881123 (198848)* EN 4p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
NO 8802088 A 19881212 (198904)
DK 8802621 A 19881116 (198906)
FI 8702147 A 19881116 (198906)
JP 01005455 A 19890110 (198907)
ADT EP 292052 A EP 1988-200938 19880511; JP 01005455 A JP 1988-114991 19880513
PRAI FI 1987-2147 19870515

L9 ANSWER 88 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB Soybean lecithin was hydrolyzed by phospholipase A to improve the emulsifying properties. Stability of the emulsion to temp., pH, and salt concns. were increased. When 0.5-1.0% of the enzyme-treated lecithin was added to wheat flour, baking vol. increased markedly. Addn. of 1.0% of the enzyme-treated lecithin to oil improved spreadability of margarine markedly. The **enzyme**-treated **lecithin** can be used for flour-paste, salad dressing, soups, and other oily **foods**.
AN 1988:569120 CAPLUS
DN 109:169120
TI Characteristics and application of enzyme-treated lecithin
AU Matsuoka, Kazuhiro
CS Kyowa-Hakko Kogyo Co., Ltd., Tokyo, 100, Japan
SO Gekkan Fudo Kemikaru (1988), 4(4), 54-60
CODEN: GFKEEX
DT Journal
LA Japanese

L9 ANSWER 89 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB Bread dough is mixed with lipase, gluten, and lecithins, then fermented and baked. The bread has a soft texture. Thus, flour 70, yeast 2.0, yeast **food** 0.1, **lipase** 0.05, gluten 1, soybean **lecithin** 0.3, and H2O 41 parts were mixed, kneaded, fermented for 270 min, mixed with flour 30, sugar 5, NaCl 2, shortening 5, skim milk 2, and H2O 26 parts, then baked to give a bread with high organoleptic scores.
AN 1988:421938 CAPLUS
DN 109:21938
TI Manufacture of bread from dough containing lipase, gluten, and lecithin
IN Shiina, Masahiko; Morikawa, Yoichi; Tomita, Tsugio
PA Nitto Flour Milling Co., Ltd., Japan; Tanabe Seiyaku Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62285749	A2	19871211	JP 1986-128508	19860603
	JP 05028093	B4	19930423		

L9 ANSWER 90 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB **Food** emulsifiers contain .gtoreq.30% by wt. monoacyl phospholipids prepd. by treating **lecithins** (H2O content .ltoreq.65% by wt.) with 0.1-1.5 mol alkali (per 1 kg Me2CO-insol. lecithin) and **phospholipase** A. Thus, 1 ton crude lecithin contg. 55% H2O and 65% Me2CO-insol. materials was heated to 60.degree. and stirred with 2.22 kg CaCl2 and 10 L 5 N NaOH, then a 50-L aq. dispersion contg. 2.9 kg Pancreatin KM was added, and the mixt. was treated with 26L

5 N NaOH, dried, and filtered to give a light-colored emulsifier contg. 36.4% (wt/wt) monoacyl phospholipids. This emulsifier (0.2g) was used for emulsification of soybean oil.

AN 1988:629129 CAPLUS
DN 109:229129
TI Manufacture of monoacyl phospholipids as food emulsifiers
IN Egi, Tadashi; Inoue, Seimjiro; Torigoe, Soko; Ota, Yoshinori
PA Kyowa Hakko Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62279832	A2	19871204	JP 1986-121832	19860527

L9 ANSWER 91 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB Free fatty acids released in enzymic hydrolysis of lecithins are treated with Ca(OH)2 or CaO to form soaps to obtain a modified lecithin with increased polarity and improved emulsifying capacity. Soybean lecithin (10 g) was dispersed in 100 g warm water, homogenized, adjusted to pH 8.5 with Ca(OH)2, treated with 0.01 g phospholipase A2 at 25.degree. for 4 h while pH was maintained at 8.0-9.0 by adding Ca(OH)2, filtered, and concn.-dried.

AN 1987:457725 CAPLUS
DN 107:57725
TI Modification of lecithins for food manufacture
IN Nakazato, Masato; Saito, Mieko
PA Nisshin Oil Mills, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62014790	A2	19870123	JP 1985-152899	19850711
	JP 04081431	B4	19921224		

L9 ANSWER 92 OF 116 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB We analyzed the effects of dietary cholesterol, type of dietary fat, sex and sire progeny family on lecithin-cholesterol acyltransferase activity in 80 adult baboons. The animals were the progeny of 80 dams and 6 sires and were randomly assigned at birth to breast feeding or to one of three formulas containing 0.02, 0.30 or 0.60 mg cholesterol/ml. After weaning at 4 months of age the animals were fed one of four diets that were either high or low in cholesterol with 40% of the calories from either saturated or unsaturated fat. The fractional and molar rates of lecithin-cholesterol acyltransferase activity were measured at 7-8 years of age by an HPLC method. Infant diet (breast vs. formula **feeding** or level of cholesterol in formula) had no effect on **enzyme** activity later in life. The adult diets that were high in cholesterol decreased the fractional **lecithin**-cholesterol acyltransferase rate by 20%/compared to diets low in cholesterol (7.89 vs. 9.84%/h, $P < 0.002$), but dietary cholesterol did not affect the molar activity. Animals fed the high cholesterol diets had higher unesterified cholesterol concentrations compared to those fed the low cholesterol diets (38.1 mg/dl vs. 31.6 mg/dl, $P < 0.0001$). The molar lecithin-cholesterol acyltransferase rate was increased 13% by saturated compared to unsaturated fat (83.3 vs. 73.6 nmol/h per ml plasma, $P < 0.07$), but no effect of dietary fat was observed on the fractional enzyme activity. Females compared to males had significantly higher fractional (10.9 vs. 7.14%, $P < 0.0001$) and molar-lecithin-cholesterol acyltransferase activities (99.3 vs. 61.7

nmol/h per ml plasma, P < 0.0001). After adjustment for the effects of diet and sex we observed differences in the fractional activity (range, 7.2-10.8%/h, P < 0.04) and in the molar rate (range, 63.6-99.8 nmol/h per ml plasma, P < 0.07) among the six sire progeny groups. The differences among sire progeny groups are evidence for genetic differences in lecithin-cholesterol acyltransferase activities among the baboon families.

AN 1987:361555 BIOSIS
DN BA84:58958
TI EFFECTS OF DIETARY CHOLESTEROL AND FAT SEX AND SIRE ON LECITHIN-CHOLESTEROL ACYLTRANSFERASE ACTIVITY IN BABOONS.
AU MOTT G E; JACKSON E M; PRIHODA T J; MCMAHAN C A
CS 7703 FLOYD CURL DRIVE, DEP. PATHOLOGY, UNIV. TEXAS HEALTH SCIENCE CENTER, SAN ANTONIO, TEXAS 78284.
SO BIOCHIM BIOPHYS ACTA, (1987) 919 (2), 190-198.
CODEN: BBACAQ. ISSN: 0006-3002.
FS BA; OLD
LA English

L9 ANSWER 93 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB An emulsifying agent for **food** contains an effective amt. of phosphatidylglycerol prepd. by the reaction of soybean **lecithin** with glycerol in the presence of **phospholipase** D. Ca2+, Mg2+ or other polyvalent metal ions and pH have no adverse effect on the emulsifying agent. Thus, 6 g rice oil, 120 mg phosphatidylglycerol and 14 g 1% DK Ester (sucrose fatty acid ester, HLB = 8) were mixed and sonicated to give a stable emulsifier for food.
AN 1987:4028 CAPLUS
DN 106:4028
TI Emulsifying agents for food
IN Kudo, Satoshi; Umada, Mitsuo
PA Yakult Honsha Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61199749	A2	19860904	JP 1985-38838	19850301
	JP 04022535	B4	19920417		

L9 ANSWER 94 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB A new enzymic-amperometric method for the detn. of lecithin as an additive in foods and as a component of com. drugs is proposed. The method is based on a detector contg. two enzymes, choline oxidase [9028-67-5] and phospholipase D [9001-87-0], the former immobilized, the latter free in soln., and by an oxygen Clark electrode. The exptl. conditions were investigated in order to obtain wide applications with different samples. Extn. or dissoln. of the samples in ethanol proved satisfactory. The precision of the method was found to be about 1.5%. Correlation between the proposed enzymic-amperometric method and an enzymic-spectrophotometric ref. method was satisfactory.
AN 1987:83095 CAPLUS
DN 106:83095
TI Lecithin determination in foods and drugs by an amperometric enzymic sensor
AU Campanella, Luigi; Tomassetti, M.; Bruni, M. R.; Mascini, M.; Palleschi, G.
CS Dip. Chim., Univ. Roma "La Sapienza", Rome, 00185, Italy
SO Food Addit. Contam. (1986), 3(4), 277-88
CODEN: FACOEB
DT Journal
LA English

L9 ANSWER 95 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB A review with 10 refs. on the modification of **lecithins** by an enzymic (esp. **phospholipase**) method, characteristics of the **enzyme**-treated **lecithin** prepns. and use of the **enzyme**-treated **lecithin** prepns., as natural emulsifiers in **food** manuf.
AN 1987:48691 CAPLUS
DN 106:48691
TI Development of **enzyme**-treated **lecithin** and new emulsified **food**
AU Egi, Makoto
CS Kyowa Hakko Kogyo K. K., Japan
SO Shokuhin to Kaihatsu (1986), 21(9), 20-5
CODEN: SHKAEV
DT Journal; General Review
LA Japanese

L9 ANSWER 96 OF 116 AGRICOLA
AB Abstract: A reference text for biochemistry undergraduates interested in natural materials, food scientists, and technologists reviews the roles and functions of specific food components. The 12 text chapters are grouped among 3 general themes: food components and their characteristics (covering water, starches, structural polysaccharides, pectins, gums, corn sweeteners, wheat carbohydrates, general properties of **food** proteins, specific **food** proteins, lipids, oils, fats, **enzymes**, and immobilized **enzymes**); engineering **foods** (**food** additives, emulsifiers, and **lecithins**; traditional dairy, flour, malt, and soybean **foods**; **foods** of the future); and the development and use of information data bases concerning food components and their functional properties. Applications to food formulation and production are included. (wz)
AN 86:10167 AGRICOLA
DN FNC85823373
TI Functional properties of food components.
AU Pomeranz, Yeshajahu
AV DNAL (TX551.P6 F&N B-4255)
LCN 83021434
SO 1985 x, 536 p. : ill. ; 24 cm. --
Publisher: Orlando, (Fla.) : Academic Press, 1985.
Series: Food science and technology.
ISBN: 012561280X (alk. paper).
NTE Includes index.
Bibliography: p. 499-522.
CY Florida; United States
DT Bibliography; (MONOGRAPH)
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L9 ANSWER 97 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB Lecithin is transesterified by phospholipase D [9001-87-0] from Raphanus sativus roots in the presence of alc. acceptors and activators in a buffer soln. such that the ratio of reaction mixt.:alc. acceptor:hexane [110-54-3] (activator) is 15: (2-10): (1-3). The yield of phospholipid for food uses increased and the process was accelerated compared with current methods for food phospholipid prodn.
AN 1984:489244 CAPLUS
DN 101:89244
TI Method for producing phospholipids
IN Rakhimov, M. M.; Babaev, M. U.
PA Central-Asian Scientific-Research and Design-Construction Institute of the Food Industry, USSR
SO U.S.S.R.
From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1984, (12), 7.

CODEN: URXXAF
DT Patent
LA Russian
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI SU 1082374	A1	19840330	SU 1982-3461355	19820511

L9 ANSWER 98 OF 116 WPIDS (C) 2002 THOMSON DERWENT
AB DE 3405208 A UPAB: 19930925
Water-binding agent based on hemicellulose (I) is prepd. by (i) subjecting alkalising liquor to ultrafiltration to (I) content 90-140 g/l.; (ii) pptn. of (I) with mixt. of aliphatic alcohols and centrifuging; (iii) washing centrifuged ppt. with mixt. of aliphatic alcohols to remove NaOH; (iv) treating ppt. successively with HCl, H2O2, and Mg(OH2 or Mg salts and (v) sepg., drying, and emitting the (I).

In (iv) ppt. is treated as approx. 10% suspension in aq. MgOH contg. at least 60% MeOH.

USE/ADVANTAGE - Water-binding or viscosity-increasing agent, partic. for foodstuffs, esp. bakery goods, 5-50% solid components of dough being replaced by (I). In prepn. of wheat flour-based confectionery. (I) with more than 90% having particle size under 60 microns and with 70-75% reflectance is used, and pref. a starch-degrading **enzyme** and/or emulsifier based on discetyltortaric acid and **lecithin** is incorporated 4.5 pts.wt. (I) are used in place of 1 pt.wt. starch in water-contg. **foodstuffs**. (I) is obtd. from viscose prodn., reducing pollution caused by disposed in waste water, is obtd. cheaply, is odourless, tasteless, remains white on heating, but is not digested. 0/9
AN 1984-220427 [36] WPIDS
DNC C1984-092790
TI Hemicellulose prodn. for use in foodstuffs - involves alkalising cellulose liquor obtd. in viscose prodn..
DC A11 A97 D13 F01
IN BAUER, J; LENZ, J; RUF, H; WUTZEL, H
PA (CHES) CHEMIEFASER LENZING AG
CYC 2
PI DE 3405208 A 19840830 (198436)* 17p
AT 8300644 A 19840915 (198442)
ADT DE 3405208 A DE 1984-3405208 19840214
PRAI AT 1983-644 19830224

L9 ANSWER 99 OF 116 WPIDS (C) 2002 THOMSON DERWENT
AB JP 58047466 A UPAB: 19930925
Euphausia superba is treated by any of following three processes. (1) E. superba immediately after capture is frozen rapidly, defrosted and pulverised. The obtd. foamed pasty E. superba is left to stand for decomposition of chitin with suppression of autolysis. (2) E. superba immediately after capture is frozen rapidly, crushed to pellet-form and pulverised and the obtd. foamed sherbet-form E.superba is left to stand for decomposition of chitin with suppression of autolysis. (3) E. superba immediately after capture is pulverised and the obtd. foamed pasty E. superba is left to stand for decomposition of chitin with suppression of autolysis.

By this treatment chitin can be decomposed by the **enzymes** in E. superba which is emulsified by the action of the **lecithin** it contains. E. superba is deodourised and the obtd. prod. can be used as **food** material as it is or after rapid freezing. Excellent food material is produced without oxidn.

The method can be adapted for processing other living crustaceans, such as shrimps, crabs, etc.
AN 1983-40613K [17] WPIDS
DNC C1983-039673
TI Prepn. of food from Euphausia superba - by processes involving freezing,

crushing and pulverising and leaving to stand in order to allow chitin decomposition.
DC D12 D13
PA (KATA-I) KATAYAMA T
CYC 1
PI JP 58047466 A 19830319 (198317)* 6p
PRAI JP 1981-145790 19810915

L9 ANSWER 100 OF 116 AGRICOLA
AB Abstract: A comprehensive literature review (106 references) individually describes precautions and misinformation associated with specific nitrogenous macronutrients (protein; gelatin and glycine; glycoprotein starch-blockers; aspartame; lysine; tryptophan; pancreatic **enzymes** as digestive aids; and superoxide dismutase), fructose, honey, choline and **lecithin**, and dietary fiber. Emphasis is placed on various macronutrients, fiber, and related **foods** which have been commercially promoted by a variety of incompletely-supported claims. This information should be used by health professionals in addressing such claims when educating their clients and the public. (wz)
AN 84:58923 AGRICOLA
DN FNI84004503
TI Dietary supplements and health aids--a critical evaluation: Part 2--macronutrients and fiber.
AU Dubick, Michael A.
SO Journal of nutrition education., Sept 1983 Vol. 15, No. 3. p. 88-93
Publisher: Oakland : Society for Nutrition Education.
ISSN: 0022-3182
Target Audience: Specialized
NTE Literature review.
Includes 106 references.
DT Article; Law
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L9 ANSWER 101 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB **Lecithins** in **food** were detd. by an enzymic method, in which the sample was reacted with **phospholipase** C to form phosphorylcholine which was hydrolyzed with alk. phosphatase to choline. The choline was phosphorylated with choline kinase, and the ADP that formed was used to reduce PEP to pyruvate with the aid of pyruvate kinase. The pyruvate was then reduced with lactate dehydrogenase, and the disappearance of NADH was followed by spectrometry at 340 nm. The method was specific for phosphatidylcholine and had relative std. deviation levels of 3.1-8.8%. Phosphatidylcholine was detd. in several food products and the results are tabulated.
AN 1982:67356 CAPLUS
DN 96:67356
TI Enzymic determination of lecithin
AU Beutler, O.; Henniger, G.
CS Fed. Rep. Ger.
SO Swiss Food (1981), 3(12), 27-9
CODEN: SWFODG
DT Journal
LA German

L9 ANSWER 102 OF 116 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB In vitro experiments (3) were conducted to determine the efficacy of calf pregastric esterase (PGE) for hydrolyzing various fats and the influence of various factors on its lipolytic activity. Calf PGE was effective in hydrolyzing butterfat and coconut oil, hydrolyzed smaller amounts of the other plant oils tested and had a very limited capacity for lard and the 6 grades of tallow studied. The esterase retained good lipolytic activity for butterfat over the pH range normally encountered in the calf abomasum after **feeding** liquid diets. Rennet clotting of reconstituted

skim-milk at pH 6.1 reduced **enzyme** hydrolysis of butterfat by 30%, presumably due to fat occlusion in the clot. **Lecithin**, skim-milk powder, casein, and lactalbumin markedly increased PGE activity; Ca++ had no effect. The bile salts taurodeoxycholate, glycochenodeoxycholate and taurochenodeoxycholate markedly inhibited PGE lipolysis, whereas others (taurocholate, deoxycholate, cholate, glycocholate) had little or no effect.

AN 1979:242939 BIOSIS
DN BA68:45443
TI IN-VITRO OBSERVATIONS ON FACTORS AFFECTING CALF PREGASTRIC ESTERASE ACTIVITY.
AU JENKINS K J
CS ANIM. RES. INST., AGRIC. CAN., OTTAWA, ONT. K1A 0C6, CAN.
SO CAN J ANIM SCI, (1979) 59 (1), 1-10.
CODEN: CNJNAT. ISSN: 0008-3984.
FS BA; OLD
LA English

L9 ANSWER 103 OF 116 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 10
AB Cryptal **lecithin**-synthesizing **enzyme** sp. activities were previously demonstrated to be increased by **feeding** a fat-supplemented diet to hamsters. To det. if a physiol. basis exists for such changes, thymidine-3H incorporation, cellular migration rate, and mucosal concn. of DNA, protein, and lecithin were measured. Radioautog. studies showed that the labeling index and cell migration rate throughout the intestine in the fat-fed hamsters and in the proximal 75% of the intestine of the control group were the same. Both parameters were reduced in the distal quarter of the control intestine. The protein/DNA ratio was increased in the proximal 75% and modestly in the distal quarter of the intestine of the fat-fed group as compared to controls, suggesting cellular hypertrophy. The lecithin content of the proximal 75% of intestine was the same in both groups but reduced in the distal quarter of the gut of the fat-fed group. Evidently, lipid feeding in the hamster can have profound effects on intestinal cellular content and turnover.

AN 1978:489295 CAPLUS
DN 89:89295
TI Enterocyte turnover and content in fat-fed hamsters
AU Mansbach, Charles M., II
CS Duke Univ. Med. Cent., VA Hosp., Durham, N. C., USA
SO Am. J. Dig. Dis. (1978), 23(6), 486-92
CODEN: AJDDAL; ISSN: 0002-9211
DT Journal
LA English

L9 ANSWER 104 OF 116 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Dietary deficiency of poly-unsaturated fatty acids and its effect on deviations in membrane lipid composition are reviewed. The coefficient of metabolic efficiency (CME) for essential fatty acids, an index of the effect of a fat diet on membrane structural features, was closely correlated with the integral indices of body growth rate in experimental animals; it was used to determine the low nutritive value of oils from rape seed and mustard seeds. Results are mentioned from studies on the disorders of stroma lipid composition in human erythrocyte membranes using a primarily fatty diet with butter, sunflower or mustard oil. Acetylcholine esterase was used in studies of the relationship of **food** fats to changes in membrane-bound **enzyme** activity. Studies demonstrating the selective interaction of cholesterol with unsaturated molecular types of **lecithin** in rats are discussed.

AN 1979:201944 BIOSIS
DN BA68:4448
TI FOOD LIPIDS AND BIOLOGICAL MEMBRANES.
AU LEVACHEV M M
CS INST. NUTR., ACAD. MED. SCI. USSR, MOSCOW, USSR.
SO VOPR PITAN, (1978) (5), 3-8.

CODEN: VPITAR. ISSN: 0042-8833.
FS BA; OLD
LA Russian

L9 ANSWER 105 OF 116 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB The thermal reaction of a lipid-acyl-hydrolase, which seems to be important for the quality preservation of vegetable **foods**, was investigated in spinach. The authors applied a simple in-situ method using TLC developed for the **enzyme** determination, to follow the thermal inactivation of the lipid-acyl-hydrolase, by measuring the decomposition of **lecithin**, mono- and digalactosyl diglycerides. According to the inactivation curves, the enzyme is relatively little resistant to heat. Since the D- and z-values resulting from the inactivation curves for phospholipase, mono- and digalactolipase activities are almost the same, it can be assumed that the lipid-acyl-hydrolase is multi-function enzyme in spinach.
AN 1978:152042 BIOSIS
DN BA65:39042
TI THERMAL INACTIVATION AND STORAGE BEHAVIOR OF TECHNOLOGICALLY IMPORTANT ENZYMES PART 4 LIPID ACYL HYDROLASE IN SPINACH.
AU PARK K H; DUDEN R; FRICKER A
CS INST. LEBENSMITTELCHEM. BUNDESFORSCHUNGSANST. ERNAEHR., 7500 KARLSRUHE, W. GER.
SO Z ERNAEHRUNGSWISS., (1977) 16 (2), 107-114.
CODEN: ZERNAL. ISSN: 0044-264X.
FS BA; OLD
LA German

L9 ANSWER 106 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB A specific method of anal. for **lecithin** in **food** was developed in which the **lecithin** in the sample (in Et2O) was hydrolyzed with **phospholipase** D to choline and phosphatidic acid. The choline, sol. in water, was purified by extn. with Et2O and pptd. with Reinecke's salt. The Reineckate was dissolved in Me2CO and its concn. detd. photometrically at 520 nm. In 10 detns. on egg powder, an av. of 15.21 mg/200 mg was obtained with a precision of 1.97 mg (2 std. deviations) and a coeff. of variation of 6.5%.
AN 1975:84524 CAPLUS
DN 82:84524
TI Lecithin
AU Moellering, Hans; Bergmeyer, Hans U.
CS Biochem. Werk Tutzing, Boehringer Mannheim G.m.b.H., Tutzing/Obb., Ger.
SO Methoden Enzym. Anal., 3. Neubearbeitete Erweiterte Aufl. (1974), Volume 2, 1860-4. Editor(s): Bergmeyer, Hans Ulrich. Publisher: Verlag Chem, Weinheim/Bergstr., Ger.
CODEN: 29GMAP
DT Conference
LA German

L9 ANSWER 107 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB A review with 18 refs. on the beneficial effects of lecithin as an emulsifying agent in milk substitutes for calves. **Lecithin** provides homogeneous fat distribution in liq. diets, aids in **lipase** action, helps eliminate foreign insol. **feed** constituents, and thus provides better **feed** utilization and better gastrointestinal tract emptying.
AN 1976:104102 CAPLUS
DN 84:104102
TI Value of lecithin as active emulsifying agent in milk replacers for calves
AU Hertrampf, J.
CS Hamburg, Ger.
SO Kongr. "Chem. Pol'nohospod.", [Pr.], 2nd (1972), Volume 2, D27, 10 pp. Publisher: Dom Tech. CSVTS, Bratislava, Czech.
CODEN: 32ASA9

DT Conference; General Review
LA German

L9 ANSWER 108 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB **Feeding** a diet contg. 0.7% cholesterol to rabbits led to increased levels of activity of the plasma cholesterol-esterifying **enzyme**, **lecithin**:-cholesterol fatty acid transferase beginning after 1 week of cholesterol **feeding**, and activity levels were 3-4-fold greater than controls after 5 weeks of feeding. Assocd. with the increased levels of enzyme activity were increased concns. of cholesterol esters in liver, kidney, and heart tissue but not in adrenal or skeletal muscle tissue. Rabbit sex seemed to have no influence on these phenomena.
AN 1969:94891 CAPLUS
DN 70:94891
TI Dietary cholesterol and serum cholesterol-esterifying activity in rabbits
AU Wells, Ibert C.; Rongone, Edward L.
CS Sch. of Med., Creighton Univ., Omaha, Nebr., USA
SO Proc. Soc. Exp. Biol. Med. (1969), 130(2), 661-4
CODEN: PSEBAA
DT Journal
LA English

L9 ANSWER 109 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB In this review of the title topic model expts. on the degradation of **lecithin**, glycerol monooleate, and triglycerides, and on the oxidn. of glucose by glucose oxidase are discussed to elucidate the behavior of **enzymes** (i.e. phospholipases B + D, oat lipase, polyphenoloxidases, hydrolases) in low-moisture **foods**. The rate of enzymic reactions increases considerably above the inflection point of the absorption isotherm (range of capillary condensation), whereas below this point it is about zero. Reactions may also occur in this range if a vehicle is available for the transport of the substrate or if the latter is a liq. (diffusion towards the enzyme). 19 references.
AN 1969:27682 CAPLUS
DN 70:27682
TI Relation between enzymic activity and moisture in dried foods
AU Acker, Ludwig
CS Westf. Wilhelms-Univ., Muenster/Westf., Ger.
SO Nahrung (1968), 12(5), 557-64
CODEN: NAHRAR
DT Journal; General Review
LA German

L9 ANSWER 110 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB C. perfringens and B. cereus can cause food poisoning having similar specific symptoms, and both produce phospholipase C. This splits lecithin, forming phosphorylcholine (I), which is chem. related to certain substances which increase intestinal contractions. The hypothesis that I has similar properties is proposed. A survey is presented of the nomenclature and published data on the formation of phospholipase C by different bacteria. As representative of a foodstuff which had caused food poisoning and provoked specific symptoms, infected vanilla cream from a cake was investigated. On bacteriological analysis this vanilla cream showed about 106 B. cereus bacteria/g. and presence of phosphorylcholine by 2 different methods: conventional chem. analysis and infrared spectroscopy. The results agreed qual. as well as quant. and showed that the cream contained about 100 mg. I/portion (50 g.). Various cultures investigated for I by the same methods showed its presence in all cases. The egg-yolk lecithin had been presumably hydrolyzed under the influence of the phospholipase C formed by the bacteria. Increasing the lecithin concn. in the medium resulted in a rise in the amt. of lecithin hydrolyzed. When the intestinal effect of I was investigated in mice the intestinal passage time was diminished from about 7.5 hrs. to about 70

min. with increasing doses (0.1-25 mg.) of synthetic I. The passage time was shortened to about 25% of the normal when the mice consumed bread wetted with filtrate of the B. cereus infected vanilla cream. The same results were obtained with prepns. of similar foodstuffs exptl. infected with C. perfringens and B. cereus. Heating of synthetic I to 120.degree. did not change its effect on the mice. Feeding a monkey synthetic I and a culture filtrate of B. cereus resulted in watery stools and a considerably shortened intestinal passage time, from a normal time of about 24 hrs. to about 8.5 hrs. A raised tonus and increased contractions were registered in isolated rabbit intestine bathed in a soln. contg. synthetic I or culture filtrates of C. perfringens and B. cereus grown in medium contg. lecithin. The same prepns. when injected intravenously into a cat caused increased contractions of a portion of the ileum isolated in situ. Prepns. of cultures of C. perfringens and B. cereus grown on lecithin-free medium did not provoke an intestinal response. The recorded intestinal effects corresponded to the symptomatology noted in human food poisoning caused by C. perfringens and B. cereus. About 4000 foodstuffs and food ingredients were analyzed for the presence of C. perfringens and B. cereus. Only 5 samples showed contamination by C. perfringens, and B. cereus was demonstrated in about 50% of the samples and often in large nos. The lecithin content is presented for some of the types of food investigated. I, an end product of the hydrolysis of **lecithin** by **phospholipase** C, is probably the toxic factor in incidents of **food** poisoning caused by C. perfringens and B. cereus.

AN 1964:5418 CAPLUS
DN 60:5418
OREF 60:979e-h,980a
TI Phospholipase C-producing bacteria and food poisoning: an experimental study on Clostridium perfringens and Bacillus cereus
AU Nygren, Borje
CS Univ. Goteberg, Swed.
SO Acta Pathol. Microbiol. Scand., Suppl. (1962), 160, 88 pp.
DT Journal
LA English

L9 ANSWER 111 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB The results of Hoffmann (ibid. 52, 133(1956)) were critically examd. and the analysis of alc.-sol. phosphoric acids further studied. **Lecithin** decline in egg dough **foods** was judged to be induced by a **lecithin**-splitting **enzyme** in the wheat with liberation of choline. Loss depended on the relative humidity in equil. with the food.

AN 1961:34260 CAPLUS
DN 55:34260
OREF 55:6716a-b
TI The decline of lecithin in egg dough foods
AU Acker, L.
SO Deut. Lebensm.-Rundschau (1957), 53, 10-12
From: C.Z. 1958, 12553.
DT Journal
LA Unavailable

L9 ANSWER 112 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB Frogs were fed pure lecithin (99%) and the intestinal walls were examd. chemically and histologically before and after feeding, and compared with those of control animals. An increase of neutral fat occurred after **feeding** of **lecithin**, which came from the **enzyme** hydrolysis of **lecithin**. Apparently lecithin does not go through the intestinal wall as such, and it is not resynthesized from its products of hydrolysis. No increase in phosphatides occurred in the intestinal wall during the resorption period.

AN 1937:10776 CAPLUS
DN 31:10776
OREF 31:1474i,1475a-b

TI Experimental histochemical investigations of lecithin metabolism in the animal body. I. The resorption of lecithin in the intestine
AU Ackermann, J.
SO Bull. intern. polon. sci., Classe sci. math. nat. (1936), B, II, 177-88
DT Journal
LA Unavailable

L9 ANSWER 113 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB The administration of fat to depancreatized dogs is followed by an excretion of extra glucose which cannot be accounted for by the glycerol portion of the fat, the N excretion and the carbohydrate stores of the animal. When the fat administered was "intarvin," it failed to show its antiketogenic action.
AN 1930:30589 CAPLUS
DN 24:30589
OREF 24:3277b-c
TI Influence of **feeding** either fat and **lipase** or **lecithin** on the sugar excretion of depancreatized dogs
AU Soskin, Samuel
SO Biochem. J. (1929), 23, 1385-90
DT Journal
LA Unavailable

L9 ANSWER 114 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB **Feeding lecithin** to dogs increases the P and **enzymes** in the organs. Inorganic phosphates and glycerophosphates did not have this effect.
AN 1914:7525 CAPLUS
DN 8:7525
OREF 8:1140a-b
TI Biological significance of phosphorus for the growing organism. II. Content of the cells in phosphorus and intracellular ferments
AU Masslov, M.
CS St. Petersburg
SO Biochem. Z. (1914), 56, 174-94
DT Journal
LA Unavailable

L9 ANSWER 115 OF 116 CAPLUS COPYRIGHT 2002 ACS
AB A list of about 230 articles which have been examined and approved as conforming with the rules of the Council is given together with the date at which the description of each article appear in the Journal. The descriptions have also been reprinted and issued as a booklet of about 112 pages. The following articles are described in Ibid., 48 (p. 51) thiosinamine, triferrin, triferrol, trikresol, trional, trioxymethylene, tritipalm; (p. 141) triphenin, tropacocaine hydrochloride, tumenol, tumenolsulphone, tumenolsulphonic acid; (p. 227) tussol, urethane, uriform, uritone, uropherin B, uropherin-S, urotropin, urotropine-new, valyl; (p. 329) veronal, vibutero, vinum extracti morrhuae-Stearns, xeroform, adnephrin suppositories, albargin; (p. 421) alypin, anthrasol, chloralamid, collargol; (p. 877) vioform, vioform gauze, celloidin, compound emulsion petroleum S and D, duotal-Heyden, essence of pepsin-Fairchild, fibiolysin, hemol; (p. 948) bromomangan, eupyrine, ferromangan Dieterich, fortoin; (p. 1031) iodo-mangan, quinine lygosinate, sodium lygosinate, vera diastase; (p. 1109) vera-diastase essence, vera-diastase tablets, creosote carbonate, creosotal, creosotal-Heyden, dionin, diacetylmorphine, ethyl-morphine hydrochloride; (p. 1185) di-acetyl-morphine hydrochloride, heroin, heroin hydrochloride, **lecithin**; (p. 1351) akaralgia, antiseptic-Crede, dolomol, elixir of **enzymes**, lubraseptic, perhydrol, phenolphthalein, silver lactate-Crede (p. 1866) medicinal **foods**, liquid peptonoids, panopepton.
AN 1908:7565 CAPLUS
DN 2:7565

OREF 2:1740b-f
TI New and Non-Official Remedies
CS Council On Pharmacy And Chemistry
SO J. Am. Med. Assoc. (1908), 48, 812 (see also advertising page 24 of the March 2nd number and also the first number of the Journal for each month)
DT Journal
LA Unavailable

L9 ANSWER 116 OF 116 WPIDS (C) 2002 THOMSON DERWENT
AB US 3257209 A UPAB: 19930831
Process for preparing soybean oil meal for use in poultry and livestock feeds wherein raw, flaked, or hulled soybeans are toasted at 185-235 deg.F for 60-100 mins. (pref. about 185 deg.F for 80 mins). The toasted product is immediately placed in a specially designed screw-press to lower the oil content. The pressure is maintained at 3500 to 5000 psi and temp. 185-235 deg.F, to give a **feed** component with at least 10% soybean oil left therein.

The product loses the **enzyme** crease factor without loss of proteins or **lecithins**, thus giving a palatable meal with 15 times
the nutritional value of solvent extracted type soybean meal and a caloric value 25-30% higher.

AN 1967-06031G [00] WPIDS
TI Preparation of soybean oil meal for use in poultry and.
DC C00
PA (LEWR) LEWIS RW
CYC 1
PI US 3257209 A (196800)*
PRAI US 1961-103735 19610418

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	100.55	162.06

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-13.01	-13.01

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